FIG.1

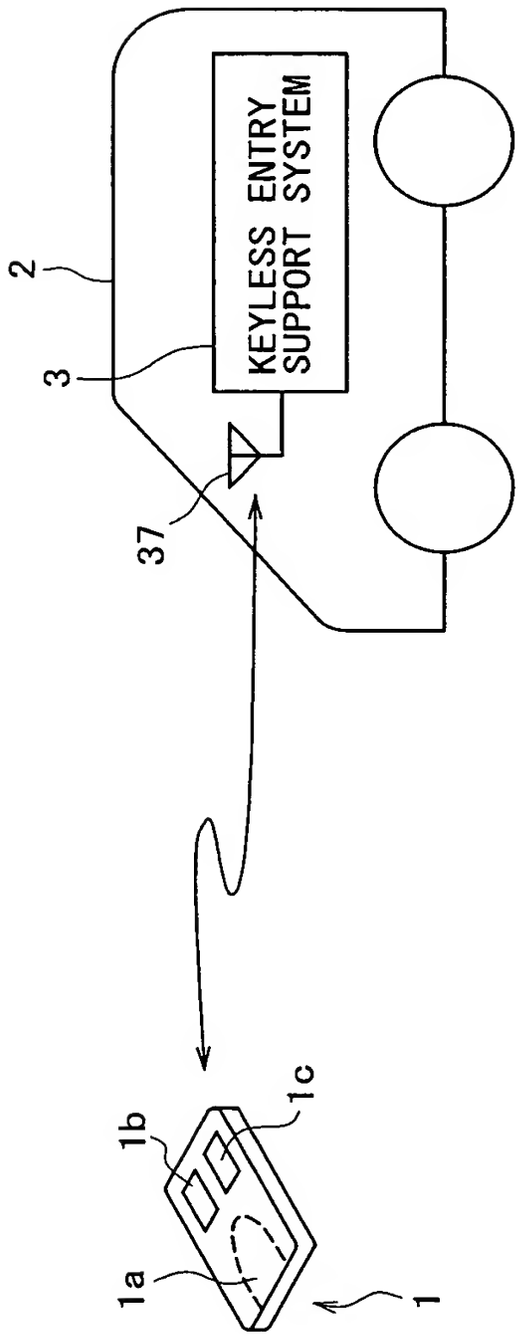


FIG. 2

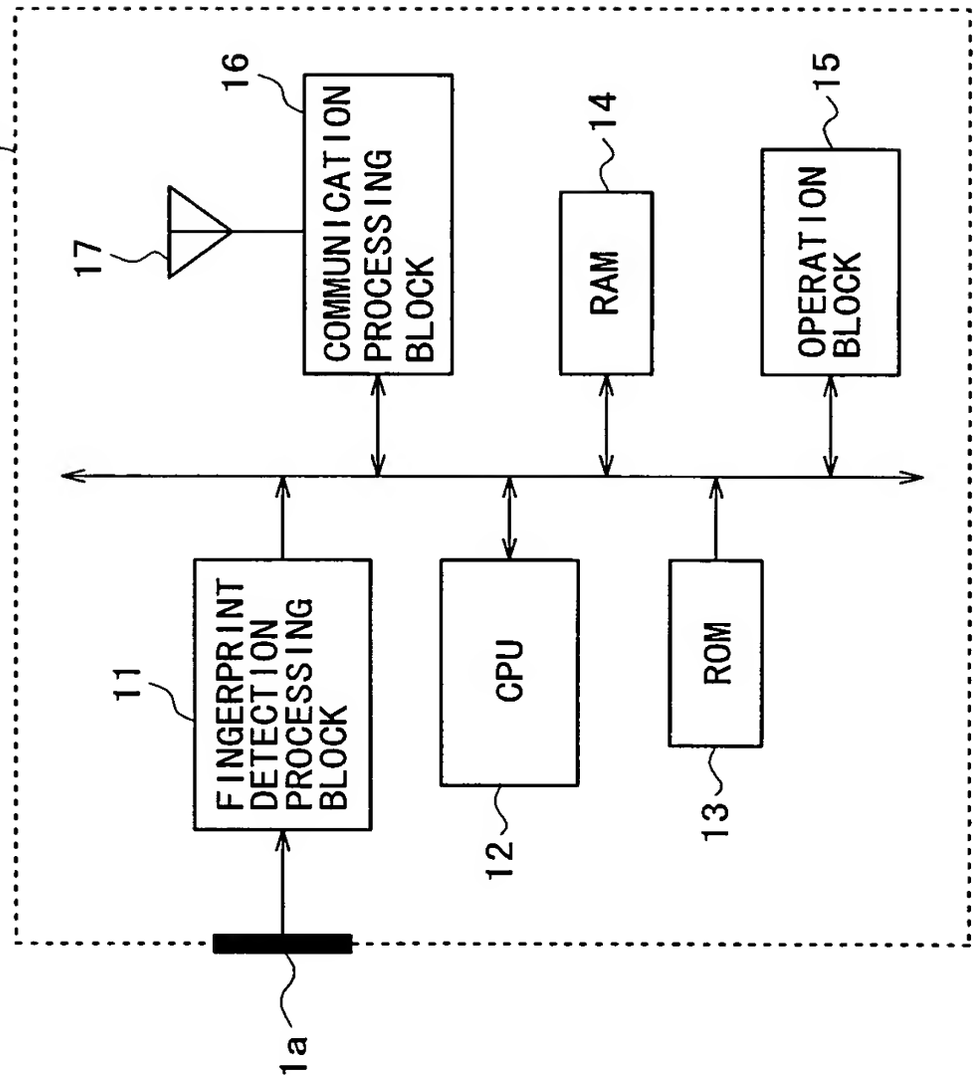

1
16
COMMUNICATION PROCESSING BLOCK
17
14
RAM
15
OPERATION BLOCK
11
FINGERPRINT DETECTION PROCESSING BLOCK
CPU
12
ROM
13
1a

FIG. 3

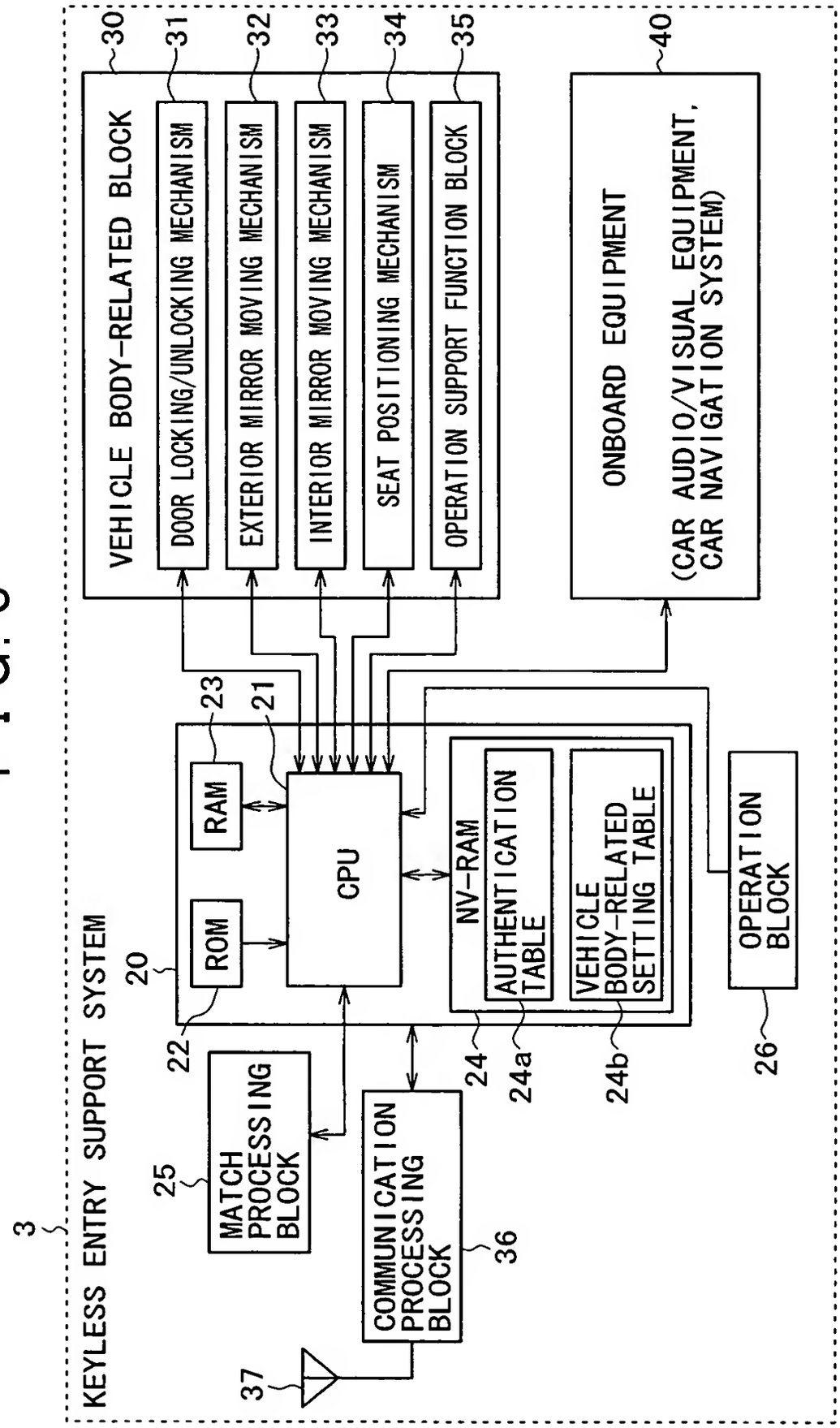

KEYLESS ENTRY SUPPORT SYSTEM
3
VEHICLE BODY-RELATED BLOCK
30
DOOR LOCKING/UNLOCKING MECHANISM
31
EXTERIOR MIRROR MOVING MECHANISM
32
INTERIOR MIRROR MOVING MECHANISM
33
SEAT POSITIONING MECHANISM
34
OPERATION SUPPORT FUNCTION BLOCK
35
ONBOARD EQUIPMENT
(CAR AUDIO/VISUAL EQUIPMENT, CAR NAVIGATION SYSTEM)
40
20
RAM
23
ROM
22
CPU
21
NV-RAM
24
AUTHENTICATION TABLE
24a
VEHICLE BODY-RELATED SETTING TABLE
24b
OPERATION BLOCK
26
MATCH PROCESSING BLOCK
25
COMMUNICATION PROCESSING BLOCK
36
37

FIG. 4

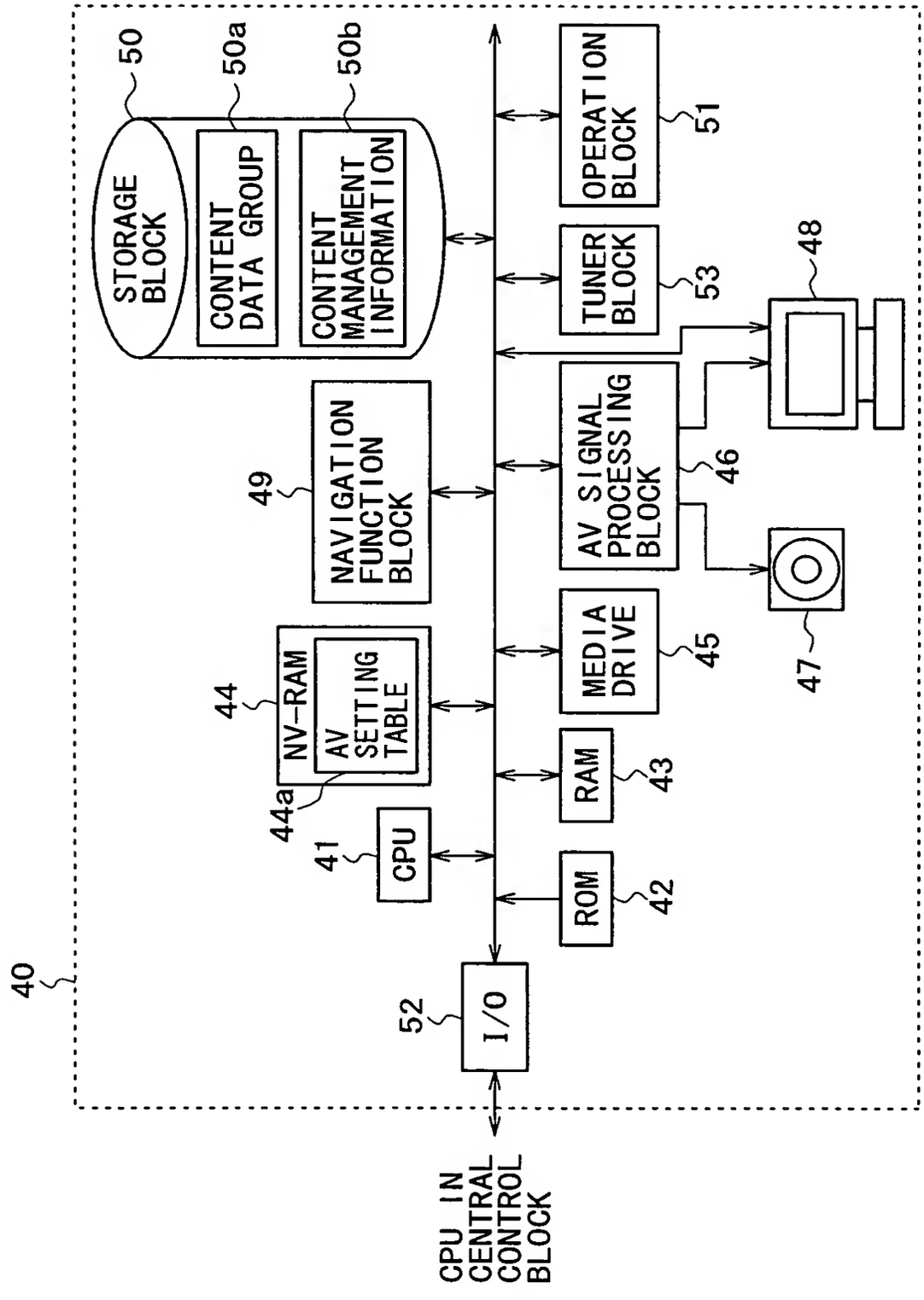

40
50
STORAGE BLOCK
50a
CONTENT DATA GROUP
50b
CONTENT MANAGEMENT INFORMATION
OPERATION BLOCK
51
TUNER BLOCK
53
48
49
NAVIGATION FUNCTION BLOCK
AV SIGNAL PROCESSING BLOCK
46
44
NV-RAM
AV SETTING TABLE
44a
MEDIA DRIVE
45
47
41
CPU
RAM
43
ROM
42
52
I/O
CPU IN CENTRAL CONTROL BLOCK

FIG. 5

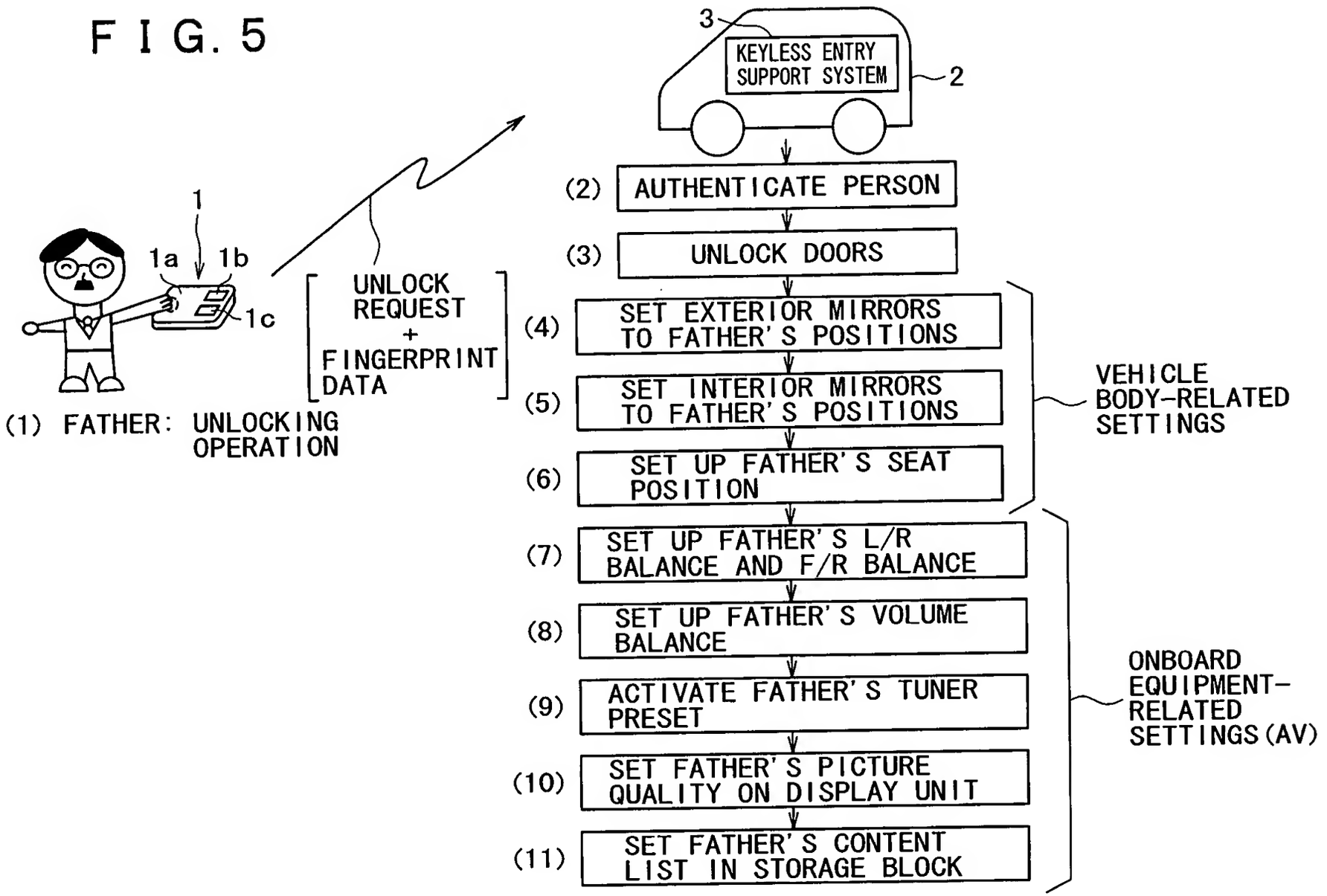

3
KEYLESS ENTRY SUPPORT SYSTEM
2
1
1a
1b
1c
UNLOCK REQUEST + FINGERPRINT DATA
(1) FATHER: UNLOCKING OPERATION
(2) AUTHENTICATE PERSON
(3) UNLOCK DOORS
(4) SET EXTERIOR MIRRORS TO FATHER'S POSITIONS
(5) SET INTERIOR MIRRORS TO FATHER'S POSITIONS
(6) SET UP FATHER'S SEAT POSITION
VEHICLE BODY-RELATED SETTINGS
(7) SET UP FATHER'S L/R BALANCE AND F/R BALANCE
(8) SET UP FATHER'S VOLUME BALANCE
(9) ACTIVATE FATHER'S TUNER PRESET
(10) SET FATHER'S PICTURE QUALITY ON DISPLAY UNIT
(11) SET FATHER'S CONTENT LIST IN STORAGE BLOCK
ONBOARD EQUIPMENT-RELATED SETTINGS (AV)

FIG. 6A

AUTHENTICATION TABLE

USER ID	FINGERPRINT DATA	PASSWORD
⋮	⋮	⋮

FIG. 6B

VEHICLE BODY-RELATED SETTING TABLE

USER ID	EXTERIOR MIRROR POSITION INFORMATION	INTERIOR MIRROR POSITION INFORMATION	SEAT POSITION INFORMATION
⋮	⋮	⋮	⋮

FIG. 7

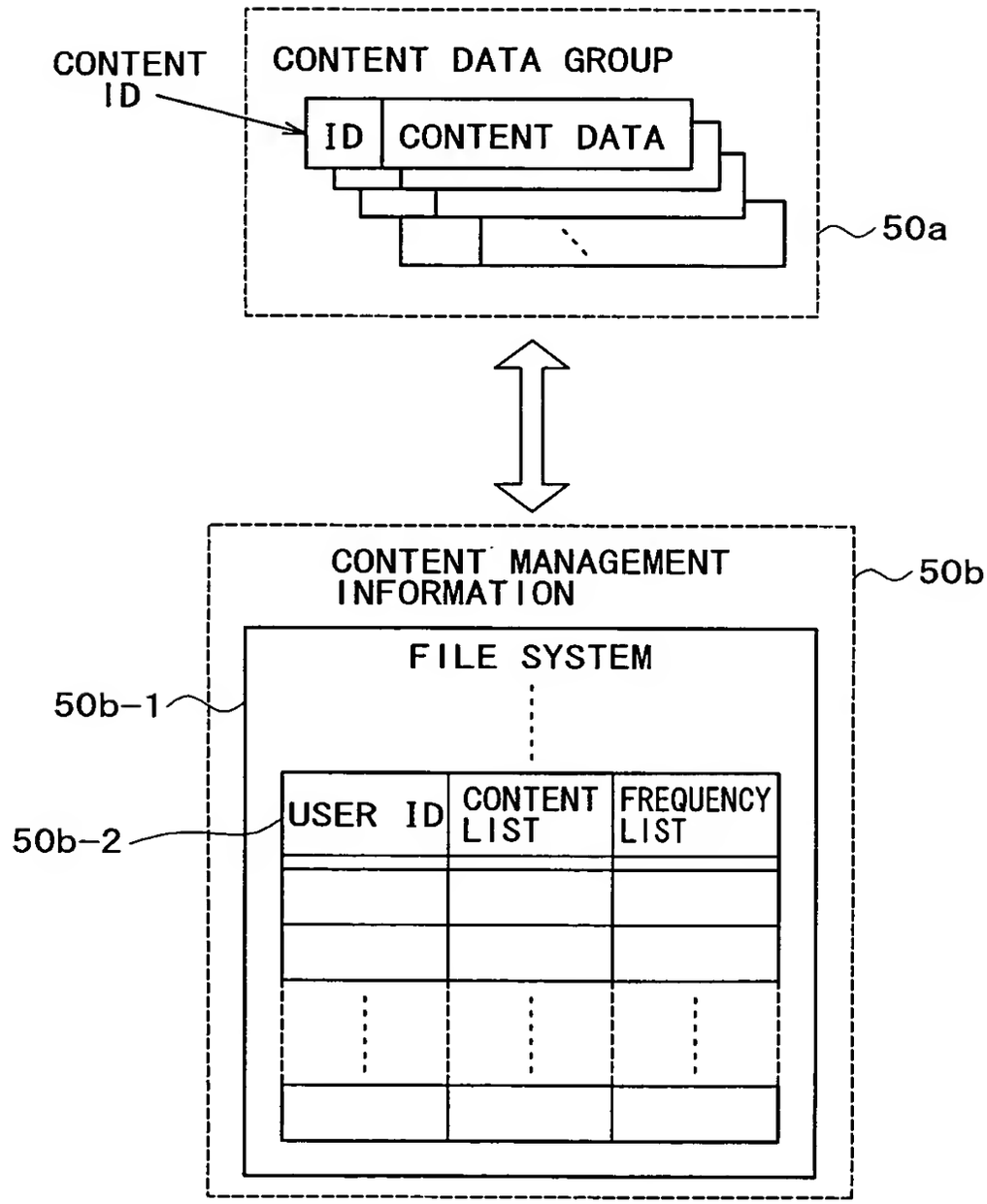

CONTENT ID
CONTENT DATA GROUP
ID
CONTENT DATA
50a
CONTENT MANAGEMENT INFORMATION
50b
FILE SYSTEM
50b-1
50b-2
USER ID
CONTENT LIST
FREQUENCY LIST

FIG. 8A

CONTENT LIST

No.	CONTENT ID
1	xxxxxxh
2	xxxxxxh
⋮	⋮
n−1	xxxxxxh
n	xxxxxxh

FIG. 8B

FREQUENCY LIST

RANK	CONTENT ID	REPRODUCTION COUNT
1	xxxxxxh	24
2	xxxxxxh	21
⋮	⋮	⋮
n−1	xxxxxxh	2
n	xxxxxxh	1

FIG. 9

AV SETTING TABLE

USER ID	L/R BALANCE	F/R BALANCE	VOLUME	TUNER PRESET	PICTURE QUALITY SETTING INFORMATION
------	------	------	------	------	------

FIG. 10

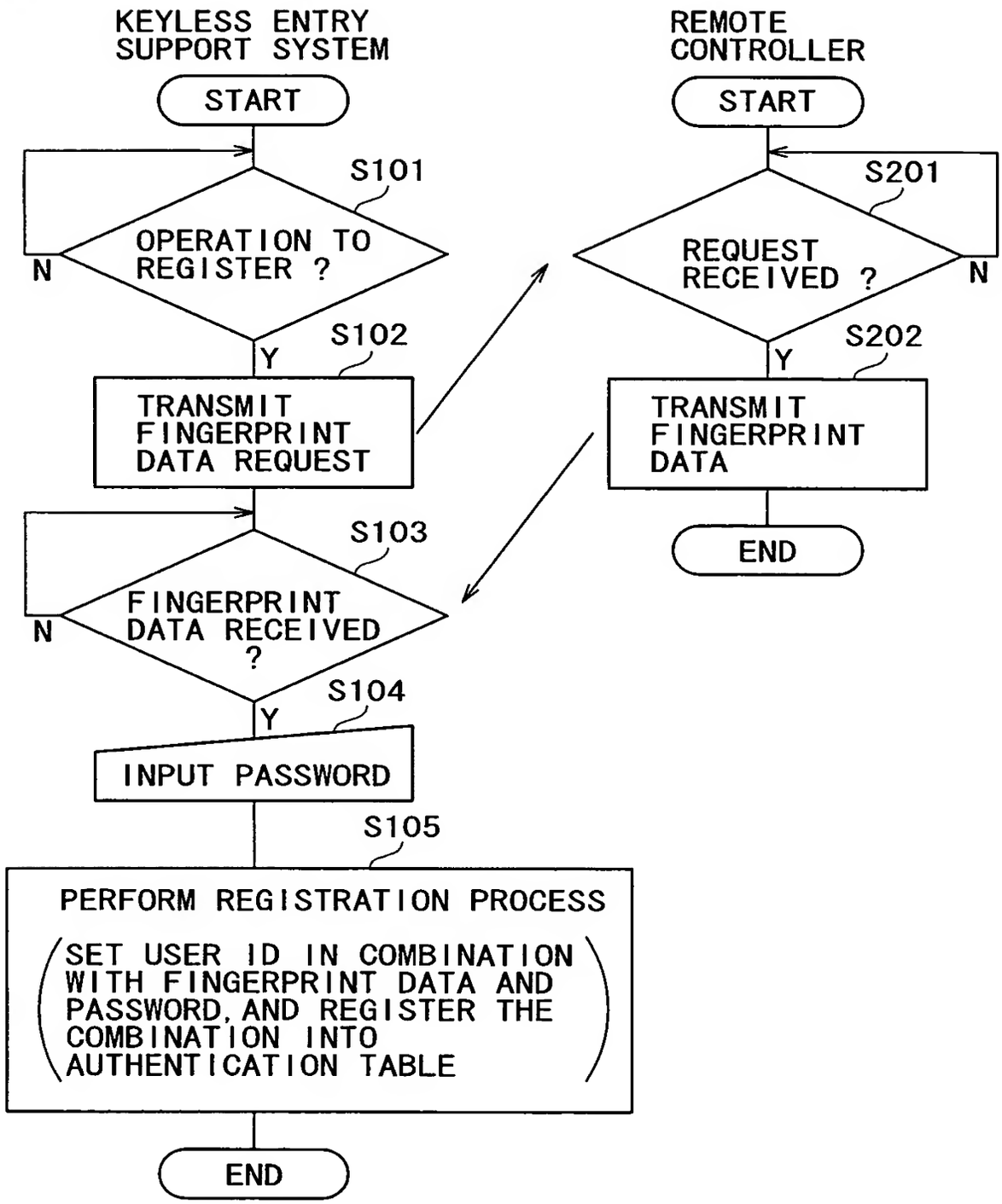
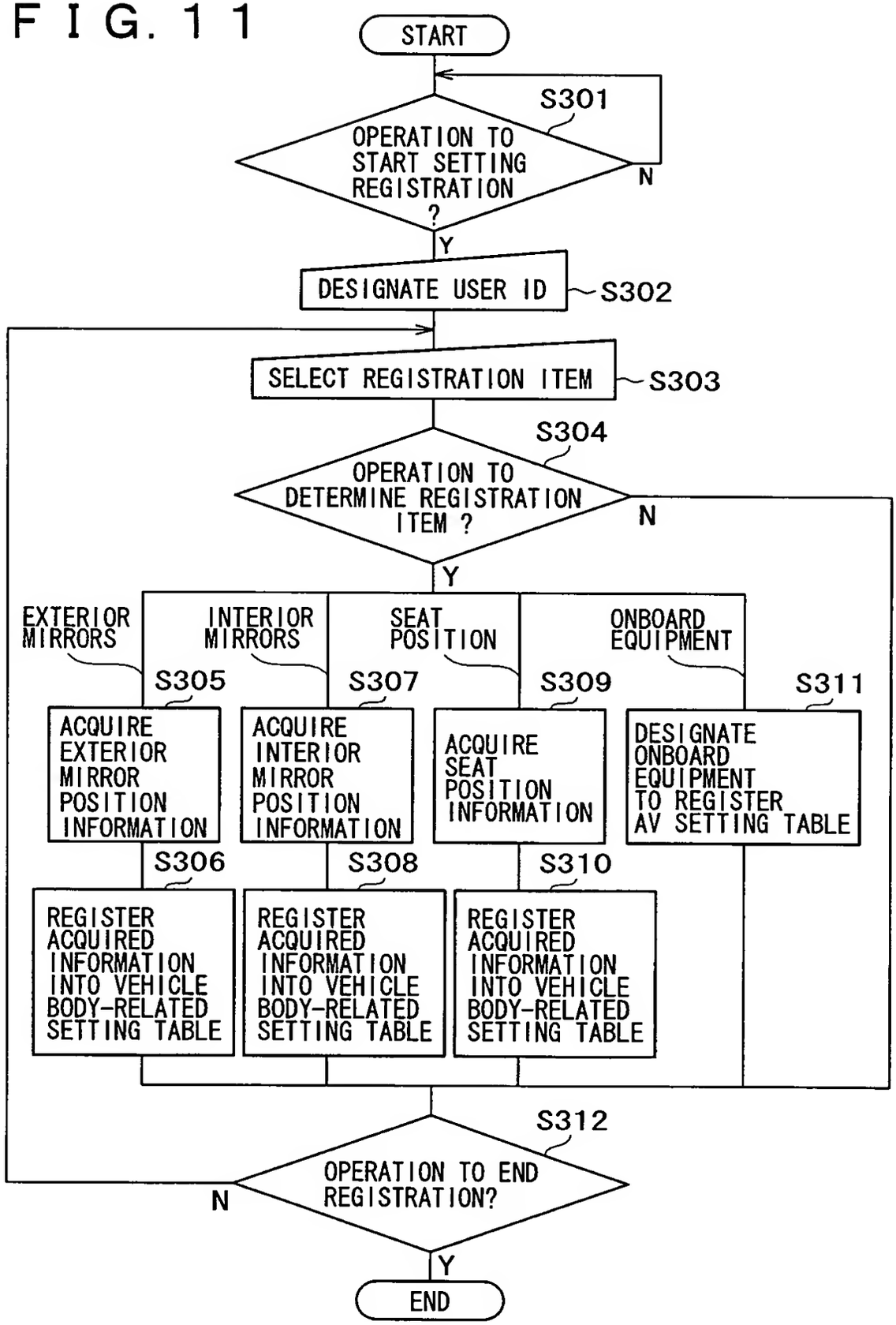

KEYLESS ENTRY SUPPORT SYSTEM
START
S101
OPERATION TO REGISTER ?
N
Y
S102
TRANSMIT FINGERPRINT DATA REQUEST
S103
FINGERPRINT DATA RECEIVED ?
N
Y
S104
INPUT PASSWORD
S105
PERFORM REGISTRATION PROCESS
(SET USER ID IN COMBINATION WITH FINGERPRINT DATA AND PASSWORD, AND REGISTER THE COMBINATION INTO AUTHENTICATION TABLE)
END
REMOTE CONTROLLER
START
S201
REQUEST RECEIVED ?
N
Y
S202
TRANSMIT FINGERPRINT DATA
END

FIG. 11


START
S301
OPERATION TO START SETTING REGISTRATION ?
N
Y
DESIGNATE USER ID
S302
SELECT REGISTRATION ITEM
S303
S304
OPERATION TO DETERMINE REGISTRATION ITEM ?
N
Y
EXTERIOR MIRRORS
INTERIOR MIRRORS
SEAT POSITION
ONBOARD EQUIPMENT
S305
S307
S309
S311
ACQUIRE EXTERIOR MIRROR POSITION INFORMATION
ACQUIRE INTERIOR MIRROR POSITION INFORMATION
ACQUIRE SEAT POSITION INFORMATION
DESIGNATE ONBOARD EQUIPMENT TO REGISTER AV SETTING TABLE
S306
S308
S310
REGISTER ACQUIRED INFORMATION INTO VEHICLE BODY-RELATED SETTING TABLE
REGISTER ACQUIRED INFORMATION INTO VEHICLE BODY-RELATED SETTING TABLE
REGISTER ACQUIRED INFORMATION INTO VEHICLE BODY-RELATED SETTING TABLE
S312
OPERATION TO END REGISTRATION?
N
Y
END

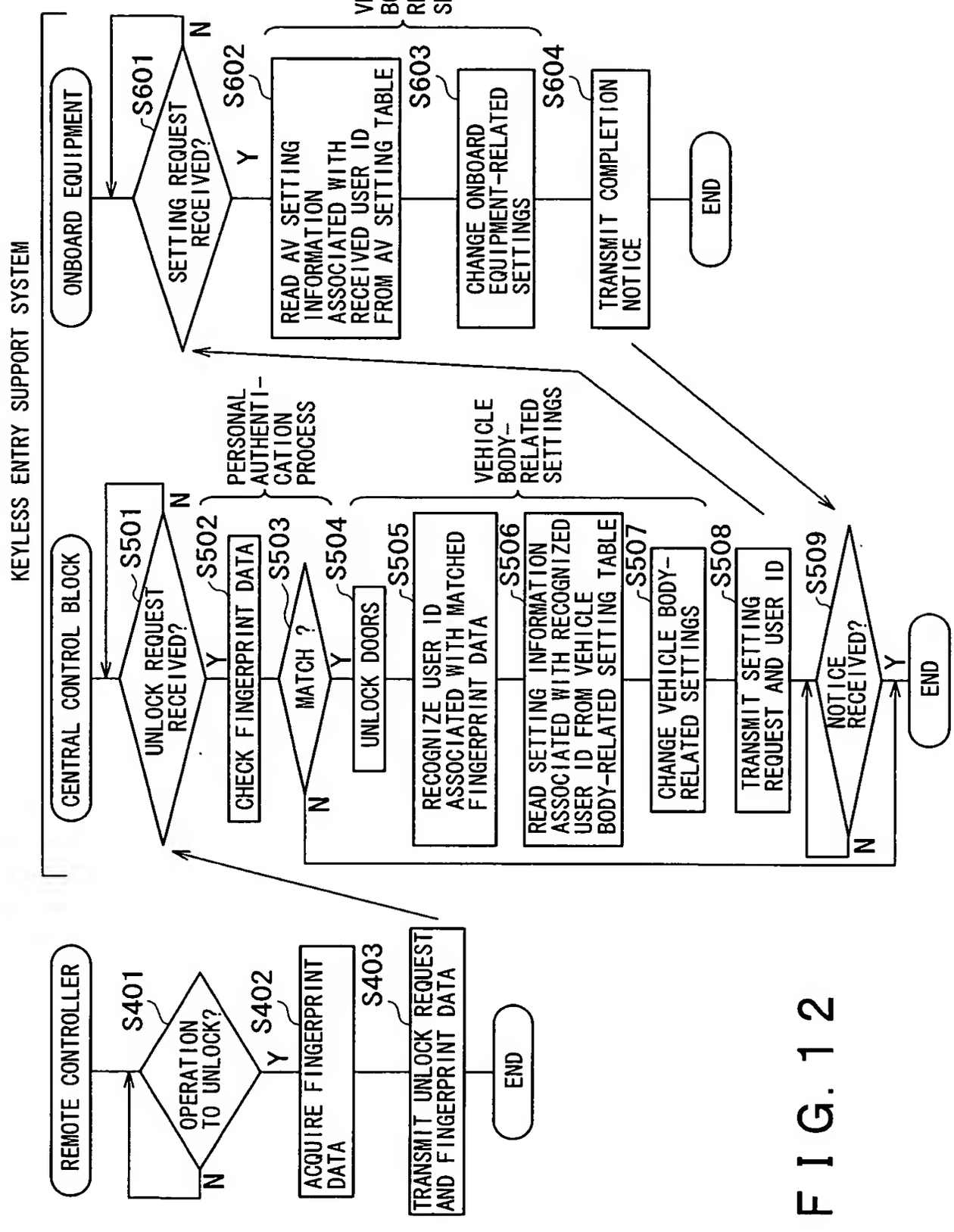

KEYLESS ENTRY SUPPORT SYSTEM
REMOTE CONTROLLER
CENTRAL CONTROL BLOCK
ONBOARD EQUIPMENT
OPERATION TO UNLOCK?
S401
N
Y
ACQUIRE FINGERPRINT DATA
S402
TRANSMIT UNLOCK REQUEST AND FINGERPRINT DATA
S403
END
UNLOCK REQUEST RECEIVED?
S501
N
Y
PERSONAL AUTHENTI-CATION PROCESS
CHECK FINGERPRINT DATA
S502
MATCH ?
S503
N
Y
UNLOCK DOORS
S504
RECOGNIZE USER ID ASSOCIATED WITH MATCHED FINGERPRINT DATA
S505
VEHICLE BODY-RELATED SETTINGS
READ SETTING INFORMATION ASSOCIATED WITH RECOGNIZED USER ID FROM VEHICLE BODY-RELATED SETTING TABLE
S506
CHANGE VEHICLE BODY-RELATED SETTINGS
S507
TRANSMIT SETTING REQUEST AND USER ID
S508
NOTICE RECEIVED?
S509
N
Y
END
SETTING REQUEST RECEIVED?
S601
N
Y
VEHICLE BODY-RELATED SETTINGS
READ AV SETTING INFORMATION ASSOCIATED WITH RECEIVED USER ID FROM AV SETTING TABLE
S602
CHANGE ONBOARD EQUIPMENT-RELATED SETTINGS
S603
TRANSMIT COMPLETION NOTICE
S604
END

FIG. 12